

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A vector comprising a nucleic acid sequence encoding:
 - a) a transposase gene operably linked to a first promoter, wherein the nucleic acid sequence 3' to the first promoter comprises the Kozak sequence as set forth in SEQ ID NO: 13, the Kozak sequence being positioned so as to include at least the first codon of the transposase gene; and
 - b) one or more genes of interest operably-linked to one or more additional promoters[[;]]
~~c)~~, wherein the one or more genes of interest and their operably-linked promoters are flanked by transposase insertion sequences recognized by the transposase;
and
 - ~~d) wherein the first promoter comprises a modified Kozak sequence, comprising ACCATG.~~
2. (Currently amended) The vector of claim 1, wherein at least one of the first twenty codons at a beginning of the transposase gene is ~~is~~ modified by changing a nucleotide at a third base position of the codon to an adenine or thymine without modifying the amino acid encoded by the codon.
3. (Currently amended) The vector of claim [[1]] 2, wherein the transposase gene is modified in its first ten codons.
4. (Original) The vector of claim 1, wherein the transposase is a Tn10 transposase.
5. (Original) The vector of claim 1, wherein the first promoter is a constitutive promoter.
6. (Original) The vector of claim 1, wherein the first promoter is an inducible promoter.
7. (Currently amended) The vector of claim 6, wherein the inducible promoter is an ovalbumin promoter, a conalbumin promoter, or a vitellogenin promoter.

8. (Original) The vector of claim 1, wherein one gene of interest is operably-linked to a second promoter.
9. (Original) The vector of claim 8, wherein the second promoter is a constitutive promoter.
10. (Original) The vector of claim 8, wherein the second promoter is an inducible promoter.
11. (Currently amended) The vector of claim 10, wherein the inducible promoter is an ovalbumin promoter, a conalbumin promoter, or a vitellogenin promoter.
12. (Original) The vector of claim 1, further comprising a polyA sequence operably-linked to the transposase gene.
13. (Original) The vector of claim 12, wherein the polyA sequence is a conalbumin polyA sequence.
14. (Original) The vector of claim 1 or claim 12, further comprising two stop codons operably-linked to the transposase gene.
15. (Original) The vector of claim 1, wherein a first gene of interest is operably-linked to a second promoter and a second gene of interest is operably-linked to a third promoter.
16. (Original) The vector of claim 1, wherein a first and a second gene of interest are operably-linked to a second promoter.
17. (Original) The vector of claim 1, further comprising an enhancer operably-linked to the one or more genes of interest.
18. (Currently amended) The vector of claim 17, wherein the enhancer comprises ~~at least~~ a functional portion of an ovalbumin enhancer.

19. (Original) The vector of claim 1, further comprising an egg directing sequence operably-linked to the one or more genes of interest.

20. (Original) The vector of claim 19, wherein the egg directing sequence is an ovalbumin signal sequence or an ovomucoid signal sequence.

21. (Original) The vector of claim 19, wherein the egg directing sequence is a vitellogenin targeting sequence.

Claims 22-51 (Canceled)

52. (New) A vector comprising a nucleic acid sequence encoding:

(a) a transposase gene operably linked to a first promoter, wherein the nucleic acid sequence 3' to the first promoter comprises a Kozak sequence comprising the nucleotide sequence as set forth in SEQ ID NO: 13, the Kozak sequence being positioned so as to include at least the first codon of the transposase gene;

(b) one or more genes of interest operably-linked to one or more additional promoters, and wherein at least one of the first promoter operably linked to the transposase gene, or the one or more additional promoters operably-linked to the one or more genes of interest, is a vitellogenin promoter or an ovalbumin promoter; and

(c) transposase insertion sequences recognized by the transposase positioned to flank the one or more genes of interest and their operably-linked promoters.

53. (New) The vector of claim 52, wherein at least one of the first twenty codons of the transposase gene is modified by changing a nucleotide at a third base position of the codon to an adenine or thymine without modifying the amino acid encoded by the codon.

54. (New) The vector of claim 52, further comprising a polyA sequence operably-linked to the transposase gene.

55. (New) The vector of claim 54, wherein the polyA sequence is a conalbumin polyA sequence.

56. (New) The vector of claim 52, further comprising two stop codons operably-linked to the transposase gene.

57. (New) The vector of claim 52, further comprising an enhancer operably-linked to the one or more genes of interest.

58. (New) The vector of claim 57, wherein the enhancer comprises a functional portion of an ovalbumin enhancer.

59. (New) The vector of claim 52, further comprising an egg directing sequence operably-linked to the one or more genes of interest.

60. (New) The vector of claim 59, wherein the egg directing sequence is at least one of an ovalbumin signal sequence, an ovomucoid signal sequence, or a vitellogenin targeting sequence.

61. (New) The vector of claim 52, wherein at least one of the first promoter operably linked to the transposase gene, or the one or more additional promoters operably-linked to the one or more genes of interest, is a constitutive promoter.

62. (New) The vector of claim 52, wherein the transposase is Tn10 transposase.

63. (New) A vector comprising a nucleic acid sequence encoding:

(a) a transposase gene operably linked to a first promoter, wherein the nucleic acid sequence 3' to the first promoter comprises a Kozak sequence comprising the nucleotide sequence as set forth in SEQ ID NO: 13, the Kozak sequence being positioned so as to include at least the first codon of the transposase gene;

(b) one or more genes of interest operably-linked to one or more additional promoters;

(c) transposase insertion sequences recognized by the transposase positioned to flank the one or more genes of interest and their operably-linked promoters; and

(d) two stop codons operably-linked to the transposase gene.

64. The vector of claim 63, wherein at least one of the first promoter operably linked to the transposase gene, or the one or more additional promoters operably-linked to the one or more genes of interest, is a constitutive promoter.

65. The vector of claim 63, wherein at least one of the first promoter operably linked to the transposase gene, or the one or more additional promoters operably-linked to the one or more genes of interest, is an inducible promoter.
66. The vector of claim 65, wherein the inducible promoter is a vitellogenin promoter, a conalbumin promoter, or an ovalbumin promoter.
67. (New) The vector of claim 63, wherein at least one of the first twenty codons of the transposase gene is modified by changing a nucleotide at a third base position of the codon to an adenine or thymine without modifying the amino acid encoded by the codon.
68. (New) The vector of claim 63, further comprising at least one egg directing sequence operably-linked to the one or more genes of interest.
69. (New) The vector of claim 63, wherein the egg directing sequence is at least one of an ovalbumin signal sequence, an ovomucoid signal sequence, or a vitellogenin targeting sequence.
70. (New) The vector of claim 63, further comprising a polyA sequence operably-linked to the transposase gene.
71. (New) The vector of claim 70, wherein the polyA sequence is a conalbumin polyA sequence.
72. (New) The vector of claim 63, wherein the transposase is Tn10 transposase.